

Review Problem #1

In a particular school district in Minnesota, third-grade students are given a particular reading test each spring. Scores on this test follow a normal distribution, with a mean of 366 points and a standard deviation of 18 points. Draw a picture of the situation so that you can make sure that your answers make sense.

- 1.) Suppose for a moment that you are a third-grade teacher in Minnesota, and one of your students, David, scores 402 points on this test. What percentage of third-graders would you expect to score LESS than David?
- 2.) Janelle scored 343 points on the test. What percentage of third-grades scored BETTER than Janelle?
- 3.) What percentage of third graders scored BETWEEN 336 points and 396 points?
- 4.) A score in the LOWEST 10% of the class is considered not to be good and any student who falls in this range is required to take remedial reading. What score cuts off the bottom 10% of students? (Another way to ask this question is: What is the highest score a student can get and still have to take the remedial course?)
- 5.) Now, imagine that you have another third-grade student named Julie, and you observe that exactly 15% of the third-grade students who took this reading test scored HIGHER than Julie. This means that Julie's score was equal to what value?